

METRIC

MIL-F-49291/7(NAVY)

11 May 1989

MILITARY SPECIFICATION SHEET

FIBER, OPTICAL, FIBER TYPE SU (DISPERSION-UNSHIFTED,
GLASS CORE AND GLASS CLADDING, SINGLE-MODE) (METRIC)

This specification is approved for use by the Department of the Navy,
and is available for use by all Departments and Agencies of the
Department of Defense.

The requirements for acquiring the product described herein shall consist of this
specification sheet and the issue of the following specification listed in that
issue of the Department of Defense Index of Specifications and Standards (DoDISS)
specified in the solicitation: MIL-F-49291.

CLASSIFICATION

Optical fiber type: SU (Dispersion-unshifted, glass core and glass
cladding, single-mode).

Optical fiber core and cladding size: A (8.5 - 10.0/125 micrometers (μm),
single-mode).

DESIGN AND CONSTRUCTION

Dimensions: See figure 1.

PERFORMANCE REQUIREMENTS

Attenuation rate: ≤ 0.6 decibel per kilometer (dB/km) at $1.310 \pm 0.020 \mu\text{m}$.
 ≤ 0.5 dB/km at $1.550 \pm 0.020 \mu\text{m}$.

Numerical aperture: N/A.

Bandwidth-distance product: N/A.

Mode field diameter: See figure 1.

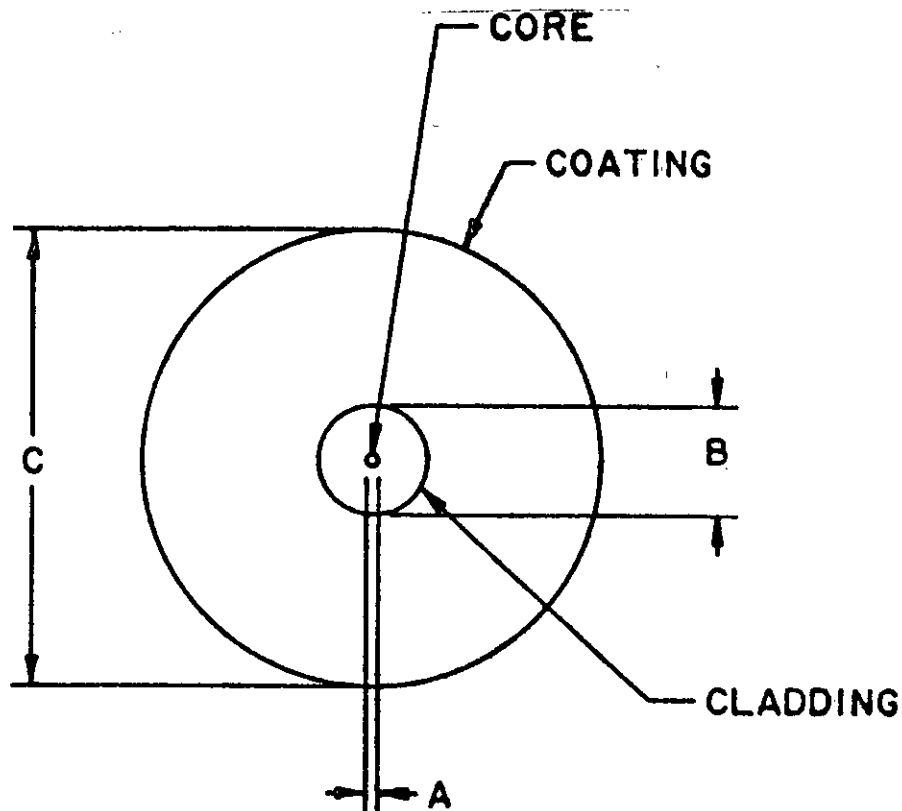
Cut-off wavelength: $\leq 1.330 \mu\text{m}$.

Transient attenuation: N/A.

AMSC N/A.

FSC 6010

DISTRIBUTION STATEMENT A. Approved for public release; distribution is unlimited.



A: 8.5-10.0/125 μm with a tolerance of plus or minus 10 percent.

B: $125 \pm 2 \mu\text{m}$.

C: $250 \pm 15 \mu\text{m}$.

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FIGURE 1. Optical fiber.

ENVIRONMENTAL REQUIREMENTS

Temperature range: 2 (Operating: minus 28 to plus 85 degrees Celsius ($^{\circ}\text{C}$)
Storage: minus 62 to plus 85 $^{\circ}\text{C}$).

IDENTIFICATION MARKING: N/A.

PART IDENTIFYING NUMBER: M49291/01-007.

PART DESIGNATOR: SUA.

Review activities:
Navy - EC, YD

Preparing activity:
Navy - SH
(Project 6010-N004-2)